

**Rebuild Hawaii Consortium Meeting
November 3, 2005
HEI Training Room, 8th floor
American Savings Bank Building, Alakea and S. King Sts.
Honolulu, Hawaii**

Notes

*You can find copies of these notes and presentations on the Internet at
<http://www.rebuildhawaii.us>*

Attendees are listed on the final page.

WELCOME AND INTRODUCTIONS

Jim Maskrey, President, welcomed the group.

Eileen Yoshinaka, US Dept. of Energy, congratulated the winners of Federal energy awards.

The prestigious **2005 Presidential Award for Leadership in Energy Management** was presented to the **U.S. Department of Defense, Headquarters Pacific Air Forces Facility (PACAF) Energy Conservation Program** and accepted by **General Paul Hester for PACAF**.

The award was for energy cost savings and reduced environmental impact by executing a ten-year Energy Strategic Plan covering its 100 million square mile area of responsibility of 16 installations in the Pacific Region, including Hawaii. The plan includes innovative approaches in the use of new technologies and management practices, including the deployment of Resource Efficiency Managers. Projects implemented under the plan yielded net savings of \$1.1 million in 2004, compared to 2003 levels.

2005 Federal Energy and Water Management Awards

Water conservation award to an organization—Marine Corps Base Hawaii

During 2004, the Marine Corps Base Hawaii implemented a number of best management practices to reduce water consumption, saving 183 million gallons of water and \$360,000.

Water conservation award to small groups—Pearl Harbor Naval Facilities

During 2004, the implementation of an aggressive water resource master strategy saved one billion gallons of water and \$5.4 million.

Gold Awards from the U.S. Secretary of the Navy for energy programs given to NAVSTA Hawaii (aka Region Hawaii) and the Pacific Missile Range Facility (PMRF), barking Sands, Kauai. This is the second gold award for both groups; PMRF was also recognized with a Platinum Award in 2002.

NEW PARTNERS

Jim Maskrey, representing a new Rebuild America Partner--**The Chamber of Commerce of Hawaii**-- provided information on the Green Business Program's food services project that will

be implemented this year. Maskrey said that there is currently not much interest in efficiency from the restaurants and the Food Services Project will educate the food services industry about appliances, Energy Star Resources, utility programs, and other opportunities to become more efficient.

Rory Reiley, representing a new Business Affiliate -- **Hawaii Building Engineers Association (HBEA)**--discussed the goals of his organization which includes facilities managers of large commercial buildings and development. HBEA is currently working to introduce Building Operation Training Certification courses in Hawaii.

REBUILD HAWAII COORDINATOR REPORT

Frank Kingery, Rebuild Coordinator under a contract with DBEDT, discussed several projects underway (1) retrofit of an air compressor system used by the Hawaii Air National Guard at Hickam Air Force Base; (2) technical assistance being provided to HCDCH to implement an energy performance contract following HUD guidelines; and (3) briefing to the Department of Accounting and General Services on energy savings performance contracting and alternatives to financing resource efficiency.

PRESENTATIONS

Joseph Ting's presentation on *IAQ-On Ongoing Concern for Owners and Occupants*, discussed "who/what/when/how" of the Indoor Air Quality (IAQ) problem and its causes, understanding the building process, preventative engineering, and prevention and management of the IAQ problem. He pointed out that few people think about the "air we breathe," even though they spend about 90% of their time indoors. In addition, there is usually no attention given to IAQ until there is a problem. Ting says that "sick" buildings are caused by poor design, shoddy construction, lack of knowledge about O&M requirements, as well as insufficient funding. He says that everyone involved in building and operating facilities needs to know the consequences of their actions. He recommends that the facility manager be selected before construction begins. This simple step means that building owners might have the opportunity to solve IAQ problems early on, before they become a major problem. Building owners need to recognize IAQ problems, identify contaminants such as formaldehyde, find solutions, ensure documentation of systems, and design for the wellness of occupants.

Elizabeth Raman (DBEDT) summarized the **2005 Benchmarking Study of Electrical Usage of State Facilities on Oahu**, prepared by Cedric D.O. Chong and Associates for DBEDT, and Oak Ridge National Laboratory's technical review of the study. The study quantified electrical energy use in State of Hawaii facilities on Oahu by state agency, building occupancy type, and end use. Selected Energy Conservation Measures (ECM) were benchmarked and estimated; savings and construction costs provided. Oak Ridge's review concluded that the study met its objectives and that the estimated potential 14% energy savings were a reasonable expectation for across-the-board savings. DBEDT agreed that the study met its objectives, although it was constrained by limited resources, lack of time, and reliance on existing data. The study methodology is transparent. The benefits are that energy use by state agency and estimated potential savings are quantified in one document. Although buildings will have to be assessed individually to determine potential, the study is already proving a useful resource for the State.

Maria Tome (DBEDT) gave an informational presentation on fuel ethanol which included topics on ethanol fuel use in the United States, cost/pricing/marketing examples, Hawaii's Ethanol Content Requirement April 2, 2006, fuel storage tanks, and where to go for further information. Fuel Ethanol was offered by mainland gas stations as early as the 1970's. Forty-one states currently have 10 or more years experience with ethanol use. Hawaii law requires, that beginning in April 2006, at least 85% of all gasoline in the State of Hawaii shall contain 10% ethanol.

Mike Chang (Johnson Controls, Inc.) and **Jonathan Wong** (The Judiciary) reported on **The Judiciary Lighting-only Energy Performance Contract**. The project retrofitted three Oahu and two Maui Courthouses at a cost of \$1.5 million, has a 10-year term, and earned \$85,000 in utility rebates. The following results were reported:

- Energy Cost Savings—16% or \$253,000 per year
- Demand Savings Reduction—12% or 333 kW
- Energy Savings Reduction—16% or 2 million kWh

Tom Talbot, Master Gardener, presented an update on the **Montessori School of Maui project**. The school is planning a \$6 million new campus development based on LEED principles. The buildings in the development will be passively designed and save 40% over conventional design. Efforts will also be focused on existing buildings, with a goal of 20% reduction in energy consumption. The **Guidelines for Sustainability** is the guide for this development, including integrated design guidelines for architects and incorporating curriculum for classroom use. Talbot spoke about several examples of the integration of the Guidelines in classroom activities.

Ray Minami (Department of Education) gave an update on the **Niihau Project**, a partnership of the Department of Education, the US Department of Agriculture (USDA), the County of Kauai and the Robinson family. The project is funded by a \$150,000 grant from the USDA Rural Development Agency. The funds will be used to help install a photovoltaic and battery storage facility to provide 24 hour power for a refrigerator, freezer, lights, computers and printers at the Niihau School. Once the system is installed, it will be maintained and operated by the Department of Education. The unique aspect of this project, according to Minami, is that it was developed at a Rebuild Hawaii Consortium meeting. Following a presentation by the USDA, the Department of Education indicated that it had a project that could use RDA funds. The County of Kauai offered support and the project went on from there.

Nick Hall (TecMarket Works) made a presentation on **Non-Energy Benefits of Energy Projects** based on an opinion survey of 74 customers of a Wisconsin utility commercial incentive program. Benefits and benefit values were measured for productivity, maintenance, defects and errors, morale-satisfaction, equipment life, waste generation, sales levels, personnel needs, non-energy operational costs, other participant-identified benefits. The conclusion was that sometimes the benefits were not expected and sometimes the benefits were not wanted.

Dave Rezachek (Honolulu Seawater Air Conditioning, LLC) updated the Consortium on the **Downtown Seawater Air-Conditioning Project** that proposes to provide cooling from seawater pumped from a depth of 1600 to 3000 feet to downtown Honolulu. The seawater is passed through a heat exchanger where it cools fresh, chilled water that is circulated to buildings. The

project has received legislative support to seek \$80 million in tax-exempt financing. A preliminary Draft Environmental Impact Statement has been completed and meetings with potential customers and investors (Hawaii and the mainland) are underway.

Gail-Suzuki Jones (DBEDT) provided information on Environmentally Preferable Purchasing, and the **UH Energy Star Dorm Room Demonstration Project**. Energy Star is a voluntary labeling program for energy efficient appliances and qualified products jointly managed by the US Environmental Protection Agency and USDOE. The Energy Star Dorm Room project at the University of Hawaii at Manoa campus demonstrated the energy savings potential of Energy Star labeled products in a dorm room. The purpose of the project was to educate stakeholders and the general public on the benefits of Energy Star. Partners in the project included USDOE, DBEDT, Strategic Energy Innovations, UH Center for Smart Building and Community Design, UH School of Architecture, UH Sea Grant College Program, and UH Student Housing Services. Eight private sector companies provided products for the dorm room. The demonstration project is saving over \$140 per year on electricity.

Vendor Presentations

MicroPlanet Voltage Regulator—**Mike Markrich** described his company's electronic voltage regulator, which he said:

- Precisely regulates voltage at the point of service delivery;
- Increases electrical service reliability;
- Reduces an electric utility's peak and base load;
- Reduces a business' electricity costs and extends the life of electrical equipment

New Lighting Technologies—**Dan Weyant, KLI**, announced the availability of new non-parabolic lighting fixtures with dimmers built into the ballasts, and 2-5 watt LED spotlights.

Attendees

Amel Technologies—Melek Yalcintas

Andrews Technology Inc. (ATI)—Richard Andrews, Scott Arakawa

Cedric D.O. Chong & Associates, Inc.—Raymond Liu, Joseph Ting

Chamber of Commerce of Hawaii—Jim Maskrey

City & County of Honolulu—Eugene Lee, Allyn Lee

Colliers, Monroe, Friedlander—Robert Martin

Department of Accounting and General Services (DAGS)—Dean Shimomura

Department of Business, Economic Development & Tourism (DBEDT) —Maurice Kaya, Liz Raman, Gail Suzuki-Jones, Maria Tome

Department of Education—Ray Minami, Sak Elliot, Brenda Lowrey, Nick Nichols

Division of Consumer Advocacy—Brysen Poulton

Eco-Lite—Tom Brennan

Energy Industries—Miles Kubo, Karen Leifheit

The Gas Company—Steve Golden

Hawaii Building Engineers Association—Rory Reiley

Hawaii Electric Light Co.—Jim Moulds

Hawaiian Electric Company, Inc. (HECO) —Jim Maskrey, Anna Akamu, Sam Nichols, Joe Feind

Honolulu Seawater Air Conditioning LLC—Dave Rezachek

Illuminating Engineers Society—Howard Wiig

Johnson Controls, Inc.—Michael Chang

The Judiciary—Jonathan Wong

Klopfenstein's Lighting, Inc.—Dan Weyant

Marine Corps Base Hawaii—Bill Nutting, Steve Butala, John Dunbar

Micro Planet, Ltd.—Mike Markrich

Montessori School of Maui—Tom Talbot

Tetra Tech, Inc.— Frank Kingery

Tower Design—Michael Krijnen

Trane Company—Mark Matsumoto

Travel Industry Management School, UH-Manoa—Ivo Martinac

Twin Eagles—John Wordin

U.S. Air Force—Chris Lippert

U.S. Department of Energy—Eileen Yoshinaka

University of Hawaii at Manoa (TIM)—Ivo Martinac